PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Goelet *et al.*

Docket No.: 13020-2(DIV1)

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Examiner (from parent): Sisson, B.

Filed: herewith

Group Art Unit (from parent): 1655

For: SINGLE NUCLEOTIDE POLYMORPHISMS AND THEIR USE IN GENETIC ANALYSIS

Kalow & Springut LLP
488 Madison Avenue, 19th Floor
New York, NY 10022

May 1, 2001

Assistant Commissioner for Patents
Washington, DC 20231

TRANSMITTAL OF SEQUENCE LISTING

Sir:

Applicant hereby requests under 37 CFR §1.821(e) the use of the compliant computer readable sequence listing already on file for grand parent application Serial No. 08/216,538 filed March 23, 1994. The paper copy of the attached sequence listing and the computer readable copy of the sequence from grand parent application Serial No. 08/216,538 filed March 23, 1994 are identical except for nonsubstantive differences relating to the attorneys of record. No new matter has been added.

Respectfully submitted,

Franklin S. Abrams
Registration No. 43,457
Attorney for the Applicants

Telephone (212)813 1600

Certificate of Express Mail Under 37 C.F.R. 1.10

I hereby declare that this correspondence is being deposited with the United States Postal Service via Express Mail Label No EL849122644US in an envelope addressed to Commissioner of Patents and Trademarks, Washington, DC 20231

5/1/01
Date

J. Colwell
Name

SEQUENCE LISTING

(1) GENERAL INFORMATION:

(i) APPLICANT: GOELET, PHILIP AND KNAPP, MICHAEL R.

(ii) TITLE OF INVENTION: SINGLE NUCLEOTIDE POLYMORPHISMS AND THEIR USE IN GENETIC ANALYSIS

(iii) NUMBER OF SEQUENCES: 95

(iv) CORRESPONDENCE ADDRESS:
- (A) ADDRESSEE: KALOW & SPRINGUT LLP
- (B) STREET: 488 MADISON AVENUE 19TH FLOOR
- (C) CITY: NEW YORK
- (D) STATE: NY
- (E) COUNTRY: US
- (F) ZIP: 10022

(v) COMPUTER READABLE FORM:
- (A) MEDIUM TYPE: Floppy disk
- (B) COMPUTER: IBM PC compatible
- (C) OPERATING SYSTEM: PC-DOS/MS-DOS
- (D) SOFTWARE: PatentIn Release #1.0, Version #1.25

(vi) CURRENT APPLICATION DATA:
- (A) APPLICATION NUMBER: US
- (B) FILING DATE:
- (C) CLASSIFICATION:

(viii) ATTORNEY/AGENT INFORMATION:
- (A) NAME: FRANKLIN S. ABRAMS
- (B) REGISTRATION NUMBER: 43,457
- (C) REFERENCE/DOCKET NUMBER: 13020-2-DIV

(ix) TELECOMMUNICATION INFORMATION:
- (A) TELEPHONE: (212) 813-1600
- (B) TELEFAX: (212) 813-1600

(2) INFORMATION FOR SEQ ID NO:1:

(i) SEQUENCE CHARACTERISTICS:
- (A) LENGTH: 20 base pairs
- (B) TYPE: nucleic acid
- (C) STRANDEDNESS: single
- (D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
- (A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 177-2

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:1:

GCAGCTCTAA GTGCTGTGGG 20

(2) INFORMATION FOR SEQ ID NO:2:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 177-2

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:2:

TGCAGAAATT CTAAGGTGTT 20

(2) INFORMATION FOR SEQ ID NO:3:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 177-2

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:3:

AACACCTTAG AATTTCTGCA 20

(2) INFORMATION FOR SEQ ID NO:4:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 177-2

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:4:

CCCACAGCAC TTAGAGCTGC 20

(2) INFORMATION FOR SEQ ID NO:5:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 595-3

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:5:

AGCTCTGGGA TGATCCACTA 20

(2) INFORMATION FOR SEQ ID NO:6:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid

(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 595-3

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:6:

TGAGGGAAAA ATGATGATGC 20

(2) INFORMATION FOR SEQ ID NO:7:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 595-3

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:7:

GCATCATCAT TTTTCCCTCA 20

(2) INFORMATION FOR SEQ ID NO:8:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 595-3

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:8:

TAGTGGATCA TCCCAGAGCT 20

(2) INFORMATION FOR SEQ ID NO:9:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 090-2

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:9:

AAAACTAATT TGATGGCCAT 20

(2) INFORMATION FOR SEQ ID NO:10:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 090-2

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:10:

AAAGTCAGAA CAATGATTGC 20

(2) INFORMATION FOR SEQ ID NO:11:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 090-2

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:11:

GCAATCATTG TTCTGACTTT 20

(2) INFORMATION FOR SEQ ID NO:12:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 090-2

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:12:

ATGGCCATCA AATTAGTTTT 20

(2) INFORMATION FOR SEQ ID NO:13:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 324-1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:13:

CACAAGGCCC AAGAACAGGA 20

(2) INFORMATION FOR SEQ ID NO:14:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 324-1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:14:

TGAGTTCAGC GAGTGTCAGA 20

(2) INFORMATION FOR SEQ ID NO:15:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 324-1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:15:

TCTGACACTC GCTGAACTCA 20

(2) INFORMATION FOR SEQ ID NO:16:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 324-1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:16:

TCCTGTTCTT GGGCCTTGTG 20

(2) INFORMATION FOR SEQ ID NO:17:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:

(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 129-1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:17:

TGGGAAAGAC CACATTATTT 20

(2) INFORMATION FOR SEQ ID NO:18:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 129-1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:18:

GTTCCCTTTT GTTTCAGACC 20

(2) INFORMATION FOR SEQ ID NO:19:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 129-1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:19:

GGTCTGAAAC AAAAGGGAAC 20

(2) INFORMATION FOR SEQ ID NO:20:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 129-1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:20:

AAATAATGTG GTCTTTCCCA 20

(2) INFORMATION FOR SEQ ID NO:21:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 007-1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:21:

CATGAGTAAG AAGCATCCGG 20

(2) INFORMATION FOR SEQ ID NO:22:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs

(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 007-1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:22:

CCATGGAGTC ATAGATAAGT 20

(2) INFORMATION FOR SEQ ID NO:23:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 007-1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:23:

ACTTATCTAT GACTCCATGG 20

(2) INFORMATION FOR SEQ ID NO:24:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 007-1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:24:

CCGGATGCTT CTTACTCATG 20

(2) INFORMATION FOR SEQ ID NO:25:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 324-2

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:25:

CCCAAGAACA GGATTGAGTT 20

(2) INFORMATION FOR SEQ ID NO:26:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:

(B) CLONE: 324-2

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:26:

AGCGAGTGTC AGAGTTGTGT 20

(2) INFORMATION FOR SEQ ID NO:27:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 324-2

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:27:

ACACAACTCT GACACTCGCT 20

(2) INFORMATION FOR SEQ ID NO:28:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 324-2

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:28:

AACTCAATCC TGTTCTTGGG 20

(2) INFORMATION FOR SEQ ID NO:29:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 177-3

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:29:

AGCAAGAAA TGGGGGGCCTT 20

(2) INFORMATION FOR SEQ ID NO:30:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 177-3

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:30:

GTCCTACAAT TGCCAGGAAG 20

(2) INFORMATION FOR SEQ ID NO:31:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 177-3

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:31:

CTTCCTGGCA ATTGTAGGAC 20

(2) INFORMATION FOR SEQ ID NO:32:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 177-3

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:32:

AAGGCCCCCC ATTTCTTGCT 20

(2) INFORMATION FOR SEQ ID NO:33:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 595-1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:33:

GAATATCAAT ATATATATAT 20

(2) INFORMATION FOR SEQ ID NO:34:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 595-1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:34:

TGTGTGTGTG TGTATTTGCT 20

(2) INFORMATION FOR SEQ ID NO:35:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 595-1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:35:

AGCAAATACA CACACACACA 20

(2) INFORMATION FOR SEQ ID NO:36:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 595-1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:36:

ATATATATAT ATTGATATTC 20

(2) INFORMATION FOR SEQ ID NO:37:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 007-3

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:37:

GCCATAATTA AGCCTGTATT 20

(2) INFORMATION FOR SEQ ID NO:38:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 007-3

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:38:

GTTTGTTTTA AATTTTGTGA 20

(2) INFORMATION FOR SEQ ID NO:39:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 007-3

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:39:

TCACAAAATT TAAAACAAAC 20

(2) INFORMATION FOR SEQ ID NO:40:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 007-3

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:40:

AATACAGGCT TAATTATGGC 20

(2) INFORMATION FOR SEQ ID NO:41:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 459-1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:41:

GTGTAGAGTA GTTCAAGGAC 20

(2) INFORMATION FOR SEQ ID NO:42:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 459-1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:42:

ATGTCTTATA CCTCCCTTTT 20

(2) INFORMATION FOR SEQ ID NO:43:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 459-1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:43:

AAAAGGGAGG TATAAGACAT 20

(2) INFORMATION FOR SEQ ID NO:44:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 459-1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:44:

GTCCTTGAAC TACTCTACAC 20

(2) INFORMATION FOR SEQ ID NO:45:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 085-1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:45:

GTGAACGGAG AGCAGGCCTT 20

(2) INFORMATION FOR SEQ ID NO:46:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 085-1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:46:

CCTGCTGAAG CCTCAGACCG 20

(2) INFORMATION FOR SEQ ID NO:47:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single

(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 085-1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:47:

CGGTCTGAGG CTTCAGCAGG 20

(2) INFORMATION FOR SEQ ID NO:48:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 085-1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:48:

AAGGCCTGCT CTCCGTTCAC 20

(2) INFORMATION FOR SEQ ID NO:49:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 007-2

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:49:

CTGCTCTTTA GACTATGACC 20

(2) INFORMATION FOR SEQ ID NO:50:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 007-2

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:50:

TCAACCTTGC ATCATGAGCT 20

(2) INFORMATION FOR SEQ ID NO:51:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 007-2

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:51:

AGCTCATGAT GCAAGGTTGA 20

(2) INFORMATION FOR SEQ ID NO:52:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 007-2

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:52:

GGTCATAGTC TAAAGAGCAG 20

(2) INFORMATION FOR SEQ ID NO:53:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 474-1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:53:

TTTGAGCTGG GACCTCAGTC 20

(2) INFORMATION FOR SEQ ID NO:54:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 474-1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:54:

TCTCCTGCCT TTAGACTCGA 20

(2) INFORMATION FOR SEQ ID NO:55:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 474-1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:55:

TCGAGTCTAA AGGCAGGAGA 20

(2) INFORMATION FOR SEQ ID NO:56:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 474-1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:56:

GACTGAGGTC CCAGCTCAAA 20

(2) INFORMATION FOR SEQ ID NO:57:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 178-1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:57:

GAACCTCTGG GCCGTGGATA 20

(2) INFORMATION FOR SEQ ID NO:58:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 178-1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:58:

TTGTTCAGAA GCACAGGTGA 20

(2) INFORMATION FOR SEQ ID NO:59:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 178-1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:59:

TCACCTGTGC TTCTGAACAA 20

(2) INFORMATION FOR SEQ ID NO:60:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 178-1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:60:

TATCCACGGC CCAGAGGTTC 20

(2) INFORMATION FOR SEQ ID NO:61:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 595-2

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:61:

GTATTTGCTA GCTCTGGGAT 20

(2) INFORMATION FOR SEQ ID NO:62:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 595-2

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:62:

ATCCACTAAT GAGGGAAAAA 20

(2) INFORMATION FOR SEQ ID NO:63:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid

(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 595-2

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:63:

TTTTTCCCTC ATTAGTGGAT 20

(2) INFORMATION FOR SEQ ID NO:64:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 595-2

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:64:

ATCCCAGAGC TAGCAAATAC 20

(2) INFORMATION FOR SEQ ID NO:65:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 177-1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:65:

GAAGTTGTGG GACAGATGTG 20

(2) INFORMATION FOR SEQ ID NO:66:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 177-1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:66:

AGAGATGCAG CTCTAAGTGC 20

(2) INFORMATION FOR SEQ ID NO:67:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 177-1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:67:

GCACTTAGAG CTGCATCTCT 20

(2) INFORMATION FOR SEQ ID NO:68:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 177-1

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:68:

CACATCTGTC CCACAACTTC 20

(2) INFORMATION FOR SEQ ID NO:69:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 459-2

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:69:

CCATGAGGAA GCCTCCACAA 20

(2) INFORMATION FOR SEQ ID NO:70:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 459-2

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:70:

GTCCCAATAG TCTGGGATTC 20

(2) INFORMATION FOR SEQ ID NO:71:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 459-2

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:71:

GAATCCCAGA CTATTGGGAC 20

(2) INFORMATION FOR SEQ ID NO:72:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 20 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Equus caballus

(vii) IMMEDIATE SOURCE:
(B) CLONE: 459-2

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:72:

TTGTGGAGGC TTCCTCATGG 20

(2) INFORMATION FOR SEQ ID NO:73:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 24 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Homo sapiens

(vii) IMMEDIATE SOURCE:
(B) CLONE: IGKC 2p12

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:73:

AAAGCAGACT ACGAGAAACA CAAA 24

(2) INFORMATION FOR SEQ ID NO:74:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 24 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Homo sapiens

(vii) IMMEDIATE SOURCE:
(B) CLONE: IGKC 2p12

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:74:

TCTACGCCTG CGAAGTCACC CATC 24

(2) INFORMATION FOR SEQ ID NO:75:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 24 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Homo sapiens

(vii) IMMEDIATE SOURCE:
(B) CLONE: IGKC 2p12

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:75:

GATGGGTGAC TTCGCAGGCG TAGA 24

(2) INFORMATION FOR SEQ ID NO:76:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 24 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Homo sapiens

(vii) IMMEDIATE SOURCE:
(B) CLONE: IGKC 2p12

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:76:

TTTGTGTTTC TCGTAGTCTG CTTT 24

(2) INFORMATION FOR SEQ ID NO:77:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 24 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Homo sapiens

(vii) IMMEDIATE SOURCE:
(B) CLONE: ILIB 2q3-q21

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:77:

CTCCTGCAAT TGACAGAGAG CTCC 24

(2) INFORMATION FOR SEQ ID NO:78:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 24 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Homo sapiens

(vii) IMMEDIATE SOURCE:
(B) CLONE: ILIB 2q3-q21

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:78:

GAGGCAGAGA ACAGCACCCA AGGT 24

(2) INFORMATION FOR SEQ ID NO:79:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 24 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Homo sapiens

(vii) IMMEDIATE SOURCE:
(B) CLONE: ILIB 2q3-q21

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:79:

ACCTTGGGTG CTGTTCTCTG CCTC 24

(2) INFORMATION FOR SEQ ID NO:80:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 24 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Homo sapiens

(vii) IMMEDIATE SOURCE:
(B) CLONE: ILIB 2q3-q21

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:80:

GGAGCTCTCT GTCAATTGCA GGAG 24

(2) INFORMATION FOR SEQ ID NO:81:

(i) SEQUENCE CHARACTERISTICS:

(A) LENGTH: 24 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Homo sapiens

(vii) IMMEDIATE SOURCE:
(B) CLONE: LDLR 19p13.3

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:81:

CTCCATCTCA AGCATCGATG TCAA 24

(2) INFORMATION FOR SEQ ID NO:82:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 24 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Homo sapiens

(vii) IMMEDIATE SOURCE:
(B) CLONE: LDLR 19p13.3

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:82:

GGGGGCAACC GGAAGACCAT CTTG 24

(2) INFORMATION FOR SEQ ID NO:83:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 24 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Homo sapiens

(vii) IMMEDIATE SOURCE:
(B) CLONE: LDLR 19p13.3

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:83:

CAAGATGGTC TTCCGGTTGC CCCC 24

(2) INFORMATION FOR SEQ ID NO:84:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 24 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Homo sapiens

(vii) IMMEDIATE SOURCE:
(B) CLONE: LDLR 19p13.3

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:84:

TTGACATCGA TGCTTGAGAT GGAG 24

(2) INFORMATION FOR SEQ ID NO:85:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 24 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Homo sapiens

(vii) IMMEDIATE SOURCE:
(B) CLONE: MET-H 7q31

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:85:

GTTTGGTCTA AGTTGCTGAT TACC 24

(2) INFORMATION FOR SEQ ID NO:86:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 24 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Homo sapiens

(vii) IMMEDIATE SOURCE:
(B) CLONE: MET-H 7q31

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:86:

GGATTTTTCT GACGATCTTT CAAC 24

(2) INFORMATION FOR SEQ ID NO:87:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 24 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Homo sapiens

(vii) IMMEDIATE SOURCE:

(B) CLONE: MET-H 7q31

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:87:

GTTGAAAGAT CGTCAGAAAA ATCC 24

(2) INFORMATION FOR SEQ ID NO:88:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 24 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Homo sapiens

(vii) IMMEDIATE SOURCE:
(B) CLONE: MET-H 7q31

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:88:

GGTAATCAGC AACTTAGACC AAAC 24

(2) INFORMATION FOR SEQ ID NO:89:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 24 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Homo sapiens

(vii) IMMEDIATE SOURCE:
(B) CLONE: PROC 2q13-q21

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:89:

GCTGACAGCG GCCCACTGCA TGGA 24

(2) INFORMATION FOR SEQ ID NO:90:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 24 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Homo sapiens

(vii) IMMEDIATE SOURCE:
(B) CLONE: PROC 2q13-q21

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:90:

GAGTCCAAGA AGCTCCTTGT CAGG 24

(2) INFORMATION FOR SEQ ID NO:91:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 24 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Homo sapiens

(vii) IMMEDIATE SOURCE:
(B) CLONE: PROC 2q13-q21

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:91:

CCTGACAAGG AGCTTCTTGG ACTC 24

(2) INFORMATION FOR SEQ ID NO:92:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 24 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Homo sapiens

(vii) IMMEDIATE SOURCE:
(B) CLONE: PROC 2q13-q21

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:92:

TCCATGCAGT GGGCCGCTGT CAGC 24

(2) INFORMATION FOR SEQ ID NO:93:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 24 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Homo sapiens

(vii) IMMEDIATE SOURCE:
(B) CLONE: MET-H 7q31

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:93:

CATCCATGTA GGAGAGCCTT AGTC 24

(2) INFORMATION FOR SEQ ID NO:94:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 26 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Homo sapiens

(vii) IMMEDIATE SOURCE:
(B) CLONE: MET-H 7q31

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:94:

CCATTTTTGT GTCTTCTAGT CTAAGG 26

(2) INFORMATION FOR SEQ ID NO:95:

(i) SEQUENCE CHARACTERISTICS:
(A) LENGTH: 23 base pairs
(B) TYPE: nucleic acid
(C) STRANDEDNESS: single
(D) TOPOLOGY: linear

(ii) MOLECULE TYPE: DNA (genomic)

(iii) HYPOTHETICAL: NO

(iv) ANTI-SENSE: NO

(vi) ORIGINAL SOURCE:
(A) ORGANISM: Homo sapiens

(vii) IMMEDIATE SOURCE:
(B) CLONE: MET-H 7q31

(xi) SEQUENCE DESCRIPTION: SEQ ID NO:95:

TTGAAAGATC GTCAGAAAAA TCC 23